

REMARKS

The Office Action mailed October 17, 2006 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-8 and 11-22, 24, and 25-29 are now pending in this application. Claims 1-8 and 11-24 stand rejected. Claims 1-4, 6, 7, 8, 11-13, 14, 17, 20, and 22 have been amended herein. Claim 23 is canceled without prejudice, waiver, or disclaimer. Claims 26-29 are newly added. No new matter has been added. No additional fee is due for newly added Claims 26-29.

Applicant notes that Claim 25 has not been objected to, rejected or allowed. Because the October 17, 2006 Office Action has not examined pending Claim 25, Applicant respectfully submits that a next Office Action not be made final to provide Applicant with the opportunity to respond to any potential objection and/or rejection with respect to Claim 25.

The rejection of Claim 1-6 and 13-23 under 35 U.S.C §112, first paragraph, is respectfully traversed. Applicant has amended Claim 11 to delete the additional recitations of positioning a flexible member between scintillators and collimators. Applicant respectfully submits that such amendments would enable one skilled in the art to make and/or use the invention as described in the present application. Accordingly, Applicant respectfully requests that the Section 112 rejection of Claims 1-6 and 13-23 be withdrawn.

The rejection of Claims 1-5, 7, 8, 11, 13-15, and 17-24 under 35 U.S.C. § 102(b) as being anticipated by Dobbs et al. (U.S. Patent 5,487,098) ("Dobbs") is respectfully traversed.

Dobbs describes a CAT scanner (10) including an X-ray source (12) and a detector assembly (14) that includes a plurality of detector modules (24) and a plurality of anti-scatter plate modules (26). The detector assembly (14) also includes an arc-shaped spine (28) including two parallel opposing surfaces (40) and (42). The detector modules (24) and the anti-scatter plate modules (26) are aligned and coupled to a same surface (40) of the spine (28). Specifically, detectors (92) of the detector modules (24) are spaced uniformly apart, spaced equidistant from the X-ray source (12), and line up to fall between anti-scatter plates (22) of the anti-scatter plate modules (26) so that the detectors (92) are not shadowed by the anti-scatter plates (22). Notably, the detector modules (24) and the anti-scatter plate modules (26) are not positioned on opposing surfaces of the spine (28).

Claim 1 recites a method for fabricating a detector assembly. The method including “positioning a first scintillator array on a first surface of a flexible member; and positioning a first collimator array on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe or suggest a method for fabricating a detector assembly as recited in Claim 1. Specifically, Dobbs does not describe or suggest positioning a first scintillator array on a first surface of a flexible member and positioning a first collimator array on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes coupling detector modules and anti-scatter plate modules to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Dobbs.

Claims 2-5 and 24 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-5 and 24 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2-5 and 24 are likewise patentable over Dobbs.

Claim 7 recites a method for fabricating a detector array, the method comprising “providing a plurality of diode assemblies each comprising at least one alignment datum; providing a plurality of scintillator packages each comprising at least one alignment datum; providing a plurality of collimator arrays each comprising at least one alignment datum; optically coupling each diode assembly with one respective scintillator package and one respective collimator array by aligning the alignment datums of the respective diode assembly, scintillator package, and collimator array using an alignment tool comprising a body with at least two alignment datums extending thereon, wherein the alignment tool does not form a component of the detector array; and positioning a flexible member between one of the scintillator packages and one of the collimator arrays by positioning one of the scintillator packages on a first surface of the flexible member and positioning one of the collimator arrays on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe or suggest a method for fabricating a detector assembly as recited in Claim 7. Specifically, Dobbs does not describe or suggest positioning a flexible member between one of the scintillator packages and one of the collimator arrays by positioning one of the scintillator packages on a first surface of the flexible member and positioning one of the collimator arrays on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes coupling detector modules and anti-scatter plate modules to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 7 is submitted to be patentable over Dobbs.

Claim 8 depends directly from independent Claim 7. When the recitations of Claim 8 are considered in combination with the recitations of Claim 7, Applicant submits that dependent Claim 8 is likewise patentable over Dobbs.

Claim 11 recites a method of replacing a detector module in a modular detector assembly including at least one existing module including an alignment datum, the method comprising “removing a module to be replaced from the assembly; providing a replacement module comprising at least one alignment datum; using an alignment tool comprising a body with at least two alignment datums extending thereon to position the replacement module in the assembly with respect to the existing module, wherein the existing module includes a scintillator array; and placing a flexible member between a collimator array and the scintillator array by positioning the scintillator array on a first surface of the flexible member and positioning the collimator array on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe nor suggest a method of replacing a detector module as recited in Claim 11. Specifically, Dobbs does not describe or suggest placing a flexible member between a collimator array and a scintillator array by positioning the scintillator array on a first surface of the flexible member and positioning the collimator array on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes coupling detector modules and anti-scatter

plate modules to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Dobbs.

Claim 13 recites a detector assembly including “a flexible member comprising a first surface and a second surface; a first scintillator array positioned on said first surface of said flexible member; and a first collimator array positioned on said second surface of said flexible member, said first collimator array optically coupled to said first scintillator array, wherein said first surface and said second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe nor suggest a detector assembly as recited in Claim 13. Specifically, Dobbs does not describe or suggest a first scintillator array positioned on a first surface of a flexible member and a first collimator array positioned on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes detector modules and anti-scatter plate modules coupled to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 13 is submitted to be patentable over Dobbs.

Claims 14 and 15 depend from independent Claim 13. When the recitations of Claims 14 and 15 are considered in combination with the recitations of Claim 13, Applicant submits that dependent Claims 14 and 15 are likewise patentable over Dobbs.

Claim 17 recites a detector assembly including “a flexible member having a first surface and a second surface; a diode assembly comprising at least one alignment datum, said diode assembly positioned on said member first surface; a scintillator package comprising at least one alignment datum, said scintillator package positioned on said member first surface; and a collimator array comprising at least one alignment datum aligned with said diode assembly alignment datum, said collimator array positioned on said member second surface, wherein said diode assembly, said scintillator package, and said collimator array are optically coupled, wherein said member first surface and said member second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe nor suggest a detector assembly as recited in Claim 17. Specifically, Dobbs does not describe or suggest a diode assembly positioned on a first

surface of a flexible member, a scintillator package positioned on the first surface, and a collimator array positioned on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes detector modules and anti-scatter plate modules coupled to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 17 is submitted to be patentable over Dobbs.

Claims 18, 19, and 22 depend, directly or indirectly, from independent Claim 17. When the recitations of Claims 18, 19, and 22 are considered in combination with the recitations of Claim 17, Applicant submits that dependent Claims 18, 19, and 22 are likewise patentable over Dobbs.

Claim 20 recites an imaging system including “a radiation source; a computer operationally coupled to said radiation source; and a radiation detector assembly operationally coupled to said computer, said detector assembly comprising: a flexible member having a first surface and a second surface; a diode assembly comprising at least one alignment datum, said diode assembly positioned on said member first surface; a scintillator package comprising at least one alignment datum, said scintillator package positioned on said member first surface; and a collimator array comprising at least one alignment datum aligned with said diode assembly alignment datum, said collimator array positioned on said member second surface, wherein said diode assembly, said scintillator package, and said collimator array are optically coupled, and wherein said member first surface and said member second surface are opposing surfaces that are substantially parallel and face away from each other.”

Dobbs does not describe nor suggest an imaging system as recited in Claim 20. Specifically, Dobbs does not describe or suggest a diode assembly positioned on a first surface of a flexible member, a scintillator package positioned on the first surface, and a collimator array positioned on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes detector modules and anti-scatter plate modules coupled to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 20 is submitted to be patentable over Dobbs.

Claim 23 has been cancelled. Claim 21 depends directly from independent Claim 20. When the recitations of Claim 21 are considered in combination with the recitations of Claim 20, Applicant submits that dependent Claim 21 is likewise patentable over Dobbs.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102 rejection of Claims 1-5, 7, 8, 11, 13-15, and 17-24 be withdrawn.

The rejection of Claims 6, 12, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Dobbs is respectfully traversed.

Dobbs is described above.

Claim 6 depends from independent Claim 1 which is recited above.

When the recitations of Claim 6 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claim 6 is likewise patentable over Dobbs.

Claim 12 recites a method for fabricating a plurality of detector assemblies. The method including “providing a plurality of diode assemblies each comprising at least one alignment datum; providing a plurality of scintillator packages each comprising at least one alignment datum; providing a plurality of collimator arrays each comprising at least one alignment datum; optically coupling each diode assembly with one respective scintillator package and one respective collimator array by aligning the alignment datums of the respective diode assembly, scintillator package, and collimator array to form a plurality of detector modules; positioning a flexible member between one of the scintillator packages and one of the collimator arrays by positioning one of the scintillator packages on a first surface of the flexible member and positioning one of the collimator arrays on a second surface of the flexible member, the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other; positioning N detector modules on a first member to form a first detector assembly; and positioning M detector modules on a second member to form a second detector assembly, wherein M is not equal to N and the first and second detector assemblies are different sized.”

Dobbs does not describe nor suggest a method for fabricating a plurality of detector assemblies as recited in Claim 12. Specifically, Dobbs does not describe or suggest positioning a flexible member between one of the scintillator packages and one of the

collimator arrays by positioning one of the scintillator packages on a first surface of the flexible member and positioning one of the collimator arrays on a second surface of the flexible member, the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes detector modules and anti-scatter plate modules coupled to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Dobbs.

Claim 16 depends from independent Claim 13, which is recited above.

Dobbs does not describe nor suggest a detector assembly as recited in Claim 13. Specifically, Dobbs does not describe or suggest a first scintillator array positioned on a first surface of a flexible member and a first collimator array positioned on a second surface of the flexible member, wherein the first surface and the second surface are opposing surfaces that are substantially parallel and face away from each other. Rather, in contrast to the present invention, Dobbs describes detector modules and anti-scatter plate modules coupled to a same surface of an arch-shaped spine. Accordingly, for at least the reasons set forth above, Claim 13 is submitted to be patentable over Dobbs.

When the recitations of Claim 16 are considered in combination with the recitations of Claim 13, Applicant submits that dependent Claim 16 is likewise patentable over Dobbs.

For at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection be withdrawn.

Newly added Claims 26 and 27 depend indirectly from independent Claim 1. When the recitations of Claims 26 and 27 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 26 and 27 are likewise patentable over the cited art.

Newly added Claim 28 depends directly from independent Claim 7. When the recitations of Claim 28 are considered in combination with the recitations of Claim 7, Applicant submits that Claim 28 is likewise patentable over the cited art.

Newly added Claim 29 depends directly from independent Claim 11. When the recitations of Claim 29 are considered in combination with the recitations of Claim 11, Applicant submits that Claim 29 is likewise patentable over the cited art.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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